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Apr 30th, 10:25 AM - 10:35 AM

## Lightning Talk: Re/Mapping the Archives: Repository Content for the Digital Humanities and Cartographer

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## Lightning Talk: Re/Mapping the Archives: Repository Content for the Digital Humanities and Cartographer

### Presenter 1 Title

Social Sciences & Data Librarian

### Session Type

10-minute lightning talk

### Abstract

The print map, once seen as a unique and preservation worthy collection treated uniquely as a collection housed within a separate library or library space, has seen a precipitous decline in usage since Google Maps and other online tools emerged on the scene starting in 2005. With many print map collections experiencing declines in researcher requests per year, this inevitable decline of print map usage underscores the difficulty in discovering maps via the library catalog, search engines, and/or via finding aids. As collection space is pinned against demands for student space, print map collections are targets for capturing additional space and rapid deaccessioning, but there is a better path forward which is a win-win for researchers and library administrators.

A renaissance in map usage is within grasp as print map collections are digitized if approached from a digital humanities and cartographer first mindset. Creating a digital facsimile of the print map alone is not sufficient as digitized maps must include a digital map viewer, descriptive metadata, coordinates, be presented in format(s) that empower researchers to use/mix/reuse maps, and provide unmediated access to full-quality maps, all within a digital archive environment. This approach enables digital humanities and the cartographer researchers to discover maps, create new forms of scholarship with maps, and increase map collection usage while enabling physical collections to be retained in lesser demand spaces or off-site. This session provides applied approaches for discovery and access to digital map collections to address digital humanities and cartography researchers.

### Location

KIPJ Theatre

### Keywords

Digital Humanities, maps, digitization, archives, cartographic materials, coordinates, map collections, digital archives

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# Re/Mapping the Archives:

Repository Content for the Digital Humanities and Cartographer

Michael R. Howser

# About Me

- I'm a Geographer and Librarian
- Co-developed and launched a digital repository
- Developed digital humanities projects, including NEH funded project.
- Have made mistakes in approaches and learned from them
- Actively working on my dissertation in the field of Geography with focus on long term preservation strategies for cartographic and spatial collections.

## The Three Elephants

1: The Landscape

2: Space vs Collections

3: Preservation, Access, and the Future



Photo by [Matthew Spiteri](#) on [Unsplash](#)





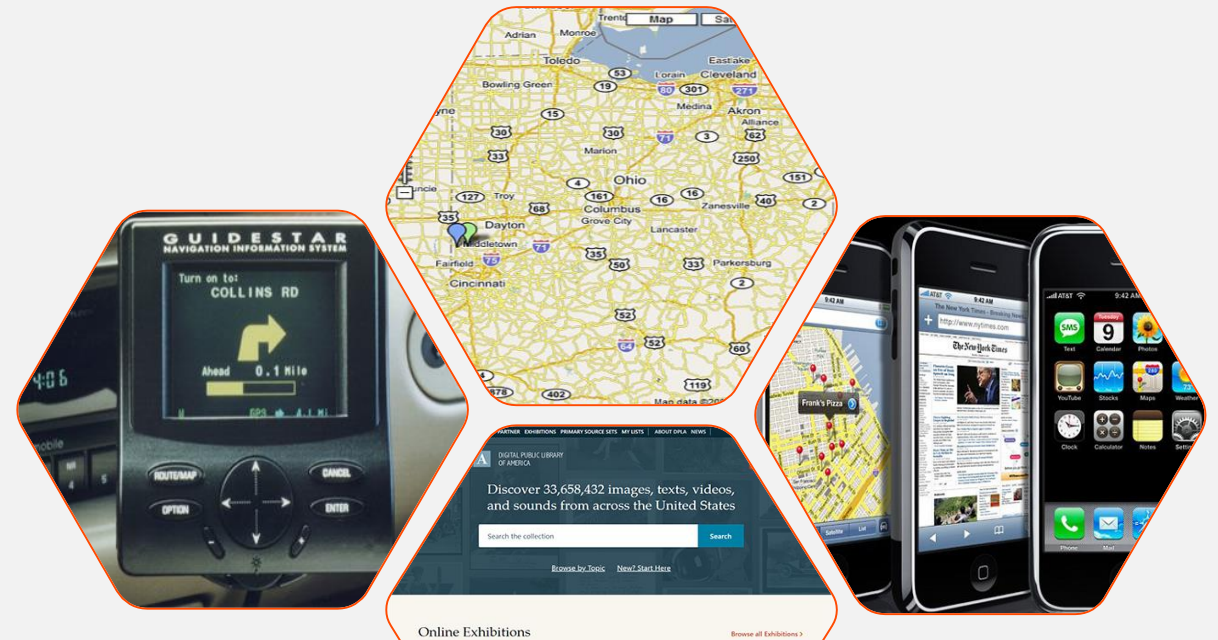
1

# The Landscape



# The Disruption of Cartography

Shift from maps in libraries to maps everywhere\*



Guidestar  
Oldsmobile  
4/12/1992<sup>1</sup>

MapQuest  
TripQuest  
02/5/1996<sup>3</sup>

US GPS  
Degrading End  
5/1/2000<sup>5</sup>

Keyhole LT  
11/17/2003<sup>7</sup>

Google  
Acq Keyhole  
10/27/2004<sup>9</sup>

Google  
Earth  
6/28/2005<sup>11</sup>

iPhone  
6/2007<sup>13</sup>

DPLA  
10/2010<sup>15</sup>

US GPS Dual  
Use Policy  
3/29/1996<sup>2</sup>

David Rumsey  
Maps  
3/2000<sup>4</sup>

ESRI ArcIMS  
Summer 2000<sup>6</sup>

Open  
StreetMap  
8/9/2004<sup>8</sup>

Google  
Maps Beta  
2/8/2005<sup>10</sup>

Google  
StreetView  
5/25/2007<sup>12</sup>

Android  
Phone  
9/23/2008<sup>14</sup>

USGS  
topoView  
7/11/2017<sup>16</sup>



<sup>1</sup> [TRAVTEK Makes Mission Possible](#)

<sup>2</sup> [Office of Science Technology Policy National Security Council Fact Sheet U.S. Global Positioning System Policy](#)

<sup>3</sup> [Digital Archaeology Plotting the Past](#)

<sup>4</sup> [State of the Art David Rumsey's Online Map Collection](#)

<sup>5</sup> [Statement by the President Regarding the United States' Decision to Stop Degrading Global Positioning System Accuracy](#)

<sup>6</sup> [ArcNews Online ArcIMS Special Section](#)

<sup>7</sup> [Keyhole Unleashes "Keyhole LT" – The Digital Earth for Consumers](#)

<sup>8</sup> [History of OpenStreetMap](#)

<sup>9</sup> [Google Acquires Keyhole Corp](#)

<sup>10</sup> [Google Maps Beta and Google Maps API](#)

<sup>11</sup> [Google Launches Free 3D Mapping and Search Product](#)

<sup>12</sup> [Google Maps Street View – Launch Video](#)

<sup>13</sup> [Apple Reinvents the Phone with iPhone](#)

<sup>14</sup> [T-Mobile officially announces the G1 Android phone](#)

<sup>15</sup> [One Step Closer to a National Digital Library](#)

<sup>16</sup> [USGS topoView](#)

# The Democratization of Maps

- Efforts focused on digitizing maps with many collections online, often with open access.
- Rare maps as primary sources for non geography classes.
- New technologies enable new ways to utilize maps.
- Military and research focused imagery becomes publicly accessible.
- GPS accuracy for civilians improved enabling a number of new devices and applications.



Source: <http://hdl.handle.net/11134/20002:860276280>



# From GIS to Web Mapping

- Creating maps required intense training within specialized GIS and cartography software.
- MapQuest, Google Earth, Google Maps, and other technologies provided examples of displaying spatial information over a basemap.
- Web mapping tools are embraced by disciplines beyond Geography.
- Instead of focusing on making the entire map, could now focus on layers unique to the research and analysis being performed.





# Exemplary Examples of Transforming Map Collections

## Perry-Castañeda Library Map Collection

lib.utexas.edu/maps

## David Rumsey

davidrumsey.com

The screenshot shows the homepage of the Perry-Castañeda Library Map Collection at The University of Texas at Austin. The header includes the university logo and navigation links like 'My accounts' and 'Give'. A search bar is present. The main content area features a 'Perry-Castañeda Library Map Collection' title, a 'SUPPORT US' button, and a list of 'Online Maps of Current Interest' including Sri Lanka Bombings, Paris - Notre-Dame Cathedral Fire, U.S. - Midwest Floods, France - Paris Shops Damaged, Kashmir - India-Pakistan Crisis, Libya - Military Situation, Mexico - Maya Train Route, Mozambique - Tropical Cyclone Idai, North Korea - Satellite Launch Facility, Syria - Latest Maps, World - Isis Attacks Maps, and Yemen - Military Situation. There is also a section for 'Online Maps of General Interest' listing maps of various regions and countries.

The screenshot shows the homepage of the David Rumsey Map Collection. The header includes navigation links like 'Home', 'About', 'View Collection', 'Publications', 'Blog', and 'Help'. A search bar is present. The main content area features a 'THE COLLECTION' title, a 'Share this Page' button, and a large map titled 'Oil, the Target of the Axis'. Below the map, there are links to 'Browse Over 90,000 Collection Maps and Related Images in LUNA Viewer', 'Visit the David Rumsey Map Center at Stanford University Library', and 'View Maps Most Recently Added to the Online Collection'. The right sidebar contains a 'Search the Site' bar, social media links, a 'Blog' section with categories like 'All Categories', 'Recent Additions', 'News', 'Featured Maps', 'Related Collections', and 'Videos', and a 'Quicklinks' section with links to 'LUNA Viewer', 'Georeferencer', 'MapRank Search', 'Google Earth', 'Google Maps', 'Second Life', 'ID GIS', 'Insight Java Client', 'Tucker', 'Atlases', 'Browse by Categories', and 'Past Ways to View'. At the bottom, there is a 'Reproductions' section with a small map thumbnail.

The background of the slide is a collage of several photographs of elephants, each contained within a white hexagonal frame. The frames are arranged in a cluster on the left side of the slide. The photos show elephants in various settings: some are in water, some are on land, and some are close-up shots of their heads and tusks. The elephants are mostly African elephants, with large ears and prominent tusks. The water in the photos is a deep blue, and the land is a mix of green foliage and dry, brownish ground.

2

# Collections vs Space



# Trends

Availability of  
Digitized Maps



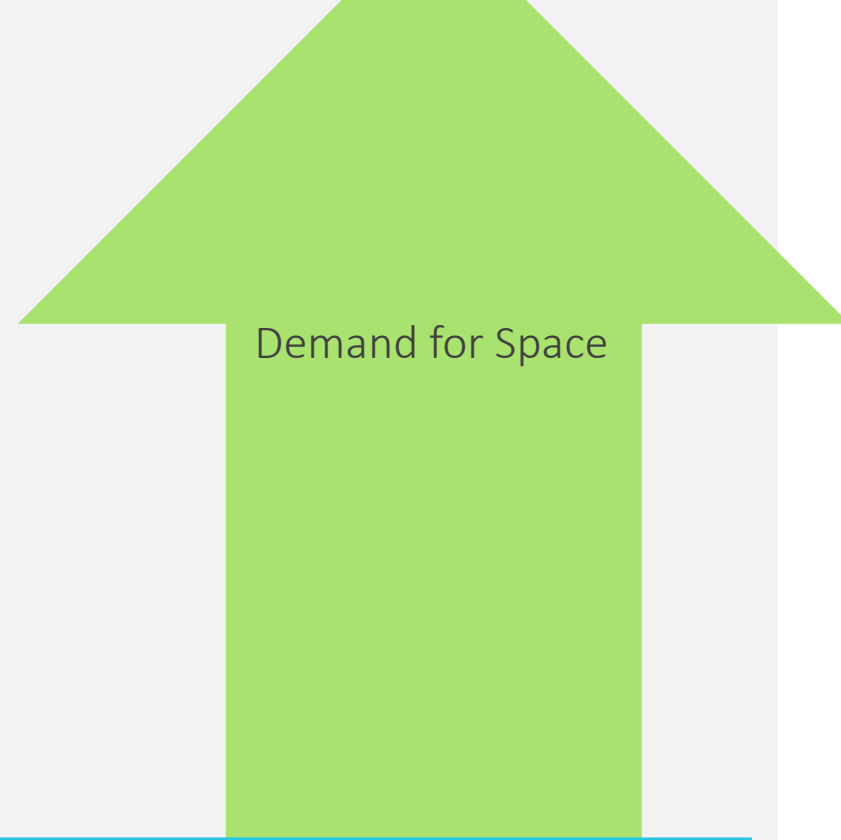
Investment in Digitizing  
Map Collections



Interest in maps and  
mapping technology by  
non-Geography  
departments



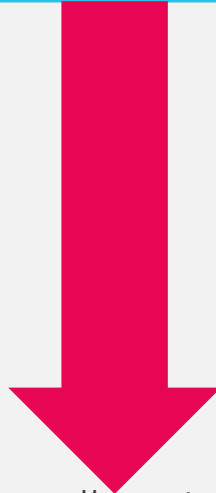
Demand for Space



Print Map  
Collection Usage



Resource Allocation for Map  
Collection Development



“A Library without collections is just a  
student union.”

- Howser



Thousands of “Maps” gathered by format, arranged by area/subject/randomness, seldom cataloged completely



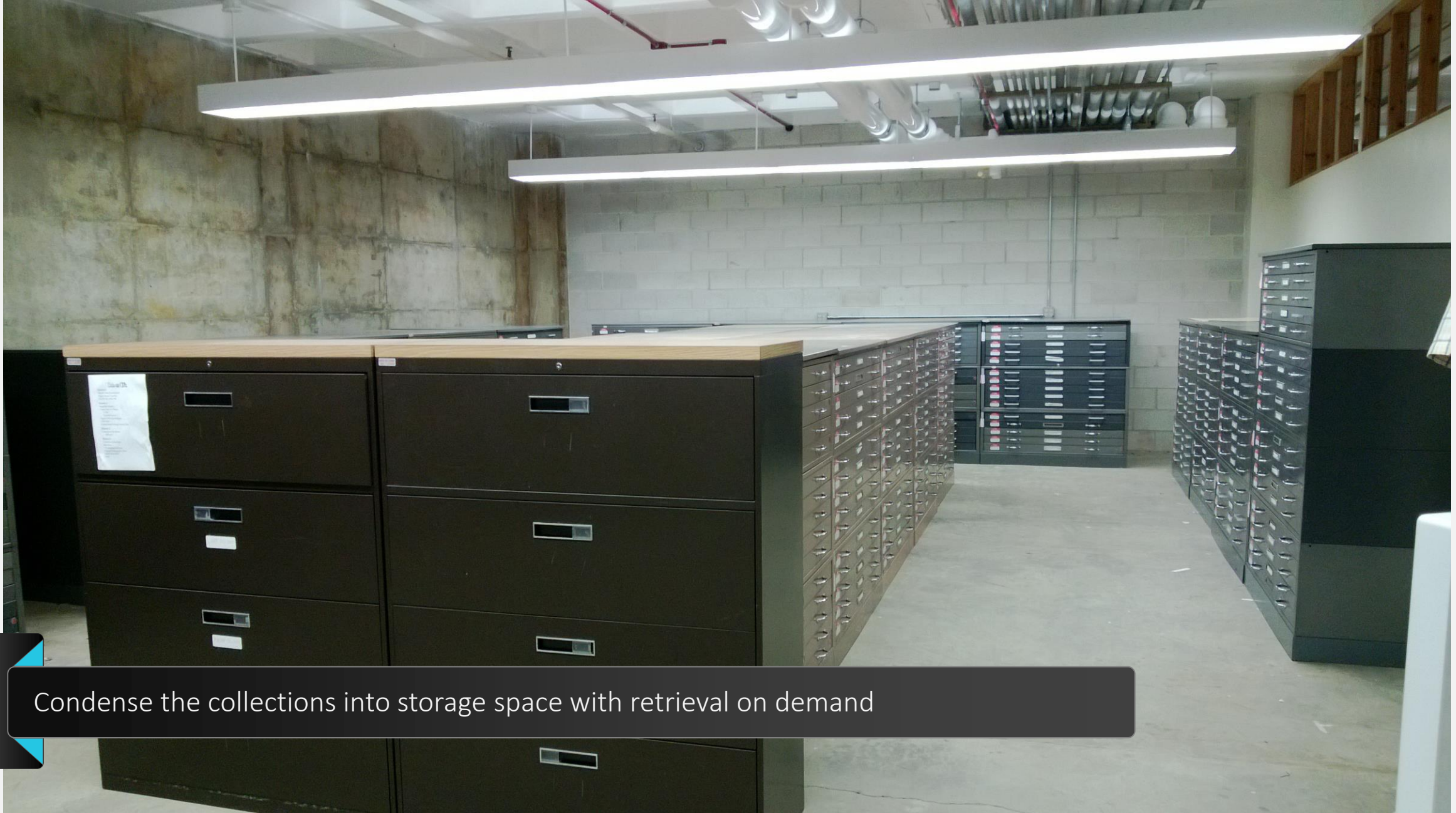
This GIF image of Bill Lumbergh from Office Space Removed

We need more student space so if you could clear out these maps that would be GREAT...



Review and move print collections





Condense the collections into storage space with retrieval on demand

This GIF image of Bob Porter and Bob Slydell from Office Space Removed

We need that storage space now. Aren't these maps all online?





We digitize the map collections





Infrastructure is needed



This GIF image of Milton Waddams grabbing red Swingline stapler from Office Space Removed

Feel Familiar? MAP COLLECTIONS HAVE VALUE! They have been collected for a reason and are rich with data for cartographers, historians, and digital humanities researchers. Do not discard without careful review!

The background of the slide is a collage of elephant photographs. A large, central hexagon shows a close-up of an elephant's head and trunk. To its left, another hexagon shows a close-up of an elephant's trunk. Above the central hexagon, a smaller one shows an elephant's ear. To the right, a hexagon shows a close-up of an elephant's skin. Below the central hexagon, there are two more hexagons: one showing a leg and another showing a close-up of the trunk. The collage is set against a white background.

3

# Preservation, Access, and the Future



# Different Approaches, Similar Archival Needs



## Cartographer

- Utilizes multiple basemaps and cartographic sources
- Layers of data created on-screen or via scripts
- End Product is map
- What is worth of preservation?
  - Layers of unique data created
  - *Bibliography and methodology*
  - Possibly the print quality map in digital format



## Digital Humanities Researcher

- Multiple primary sources consulted (likely non-map)
- Create a few layers of data, often on-screen
- End product is analysis or visualization
- What is worthy of preservation?
  - Layers of unique data created
  - Bibliography and methodology

# What is unique?

- Separate interface from content
- What data/information was created vs acquired/assembled



Photo by [Samuel Zeller](#) on [Unsplash](#)



# What is needed to replicate research?

- For cartographic materials and spatial datasets, this is an often overlooked step.
- Documenting sources of data, how data was created/assembled, and methods used will enable replication of research.
- Basemaps – sources identified and outline if they are being preserved by the providers.



Photo by [Sonny Ravesteijn](#) on [Unsplash](#)

# What format(s) needed to be preserved?

- Is the end product more important or the data utilized to create the end product?
- Is the file format of lasting value and commonly used?



Photo by [Florencia Viadana](#) on [Unsplash](#)



# How should the information be provided/presented

- Identify which format(s) and product(s) should be included within a digital repository.
- Determine if a representation of the original work and/or the underlying data is needed to enable future research.
- Included a coordinate or geographic term to the metadata record to enable visualization of collection(s) by geography.



Photo by [Makarios Tang](#) on [Unsplash](#)

# Digitized Map from Collection

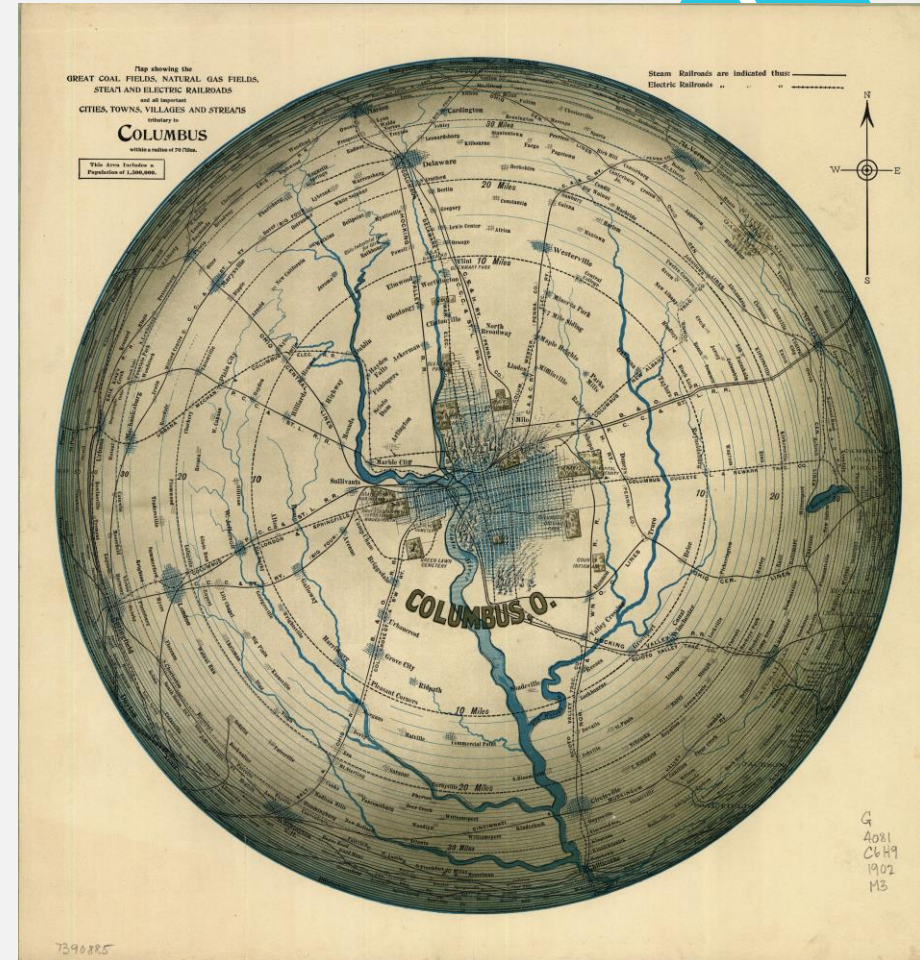
## Content

- Unique: Digitized Map from Collection with no copyright restrictions.

## Preservation Strategy:

- Digitize the map at the highest quality possible and save image in a lossless format (.JP2 or .TIFF)
  - *Do not save in PDF format, image formats are preferable for Cartographers and Digital Humanities Researchers*
- Create metadata which includes date and other key information.
- *Islandora Approach:* Utilize the Large Image content model.

## Display/Experience





# Interactive Maps & Content

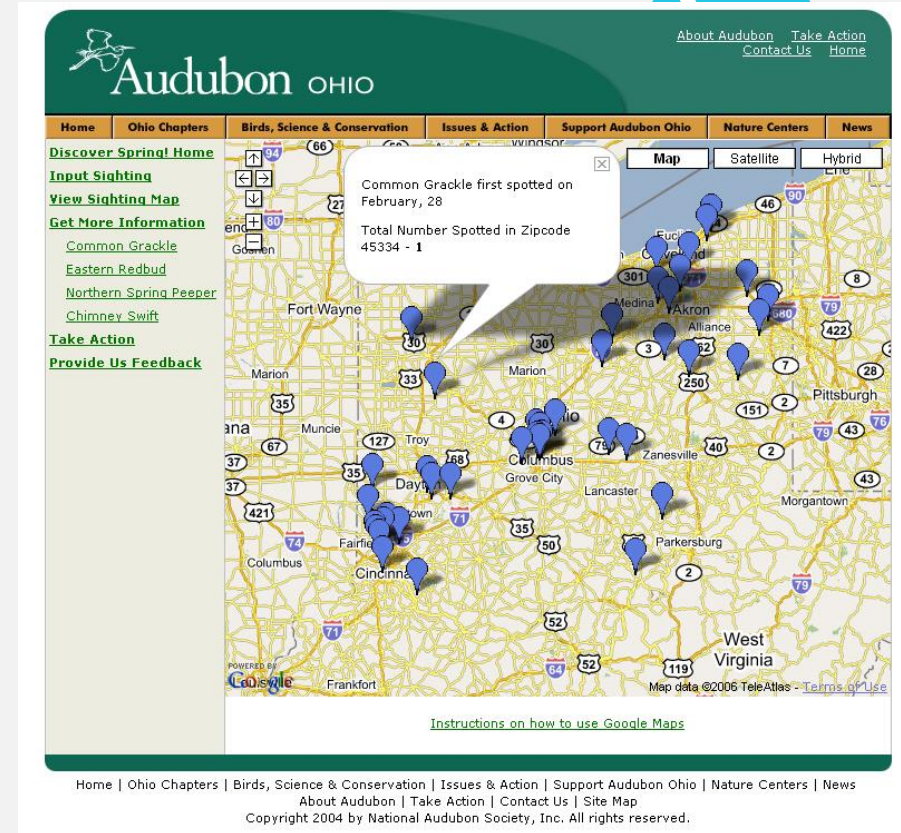
## Content

- Unique: 4 KML files of user input
- Not Unique: Google Map Interface/basemap

## Preservation Strategy:

- Retain KML files, depending on data structure, may want to convert to shapefile or other format.
- Create metadata which includes date and other key information.
- Focus on unique data which would be needed to recreate map.
- Possibly create a screenshot or PDF of original interface, and include brief description of the project.
- **Islandora Approach:** Create as a compound object with the binary content model for the KML/Shapefile, and the Large Image or PDF content model for snapshot of original interface.

## Display/Experience



# Antiquated Interactive Maps

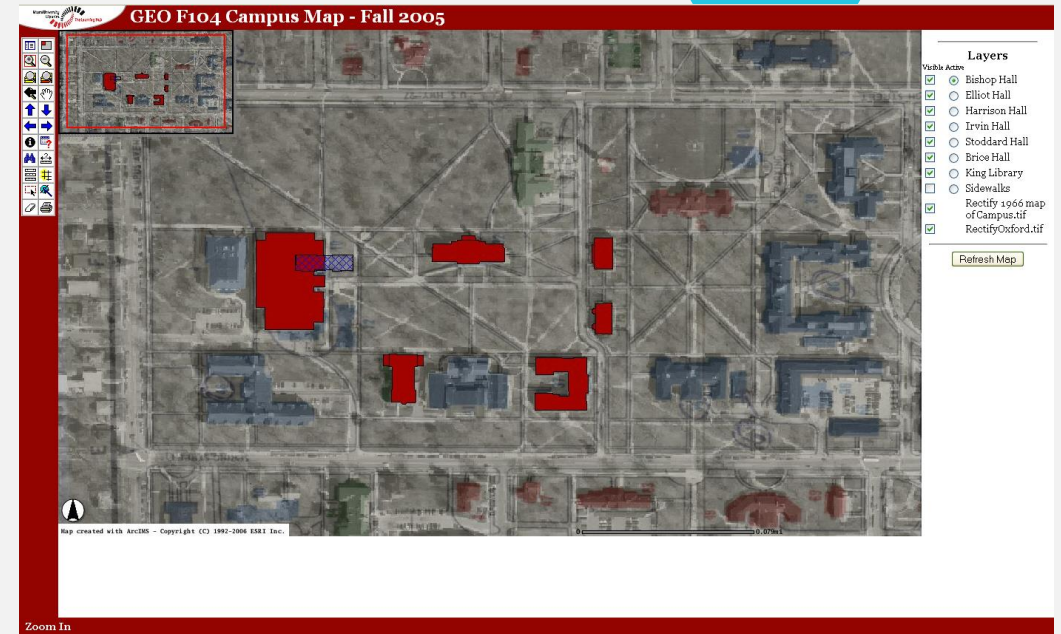
## Content

- Unique: Shapefile of campus buildings, digitized and georeferenced basemap
- Not Unique: Interface

## Preservation Strategy:

- Retain shapefile (.shp) and georeferenced basemap (.tif).
- Create metadata which includes date and other key information.
- **Islandora Approach:** Create as a compound object with the binary content model for the Shapefile, binary content model for the GeoTiff, and Large Image or PDF content model for snapshot of original interface.

## Display/Experience





# Atlases

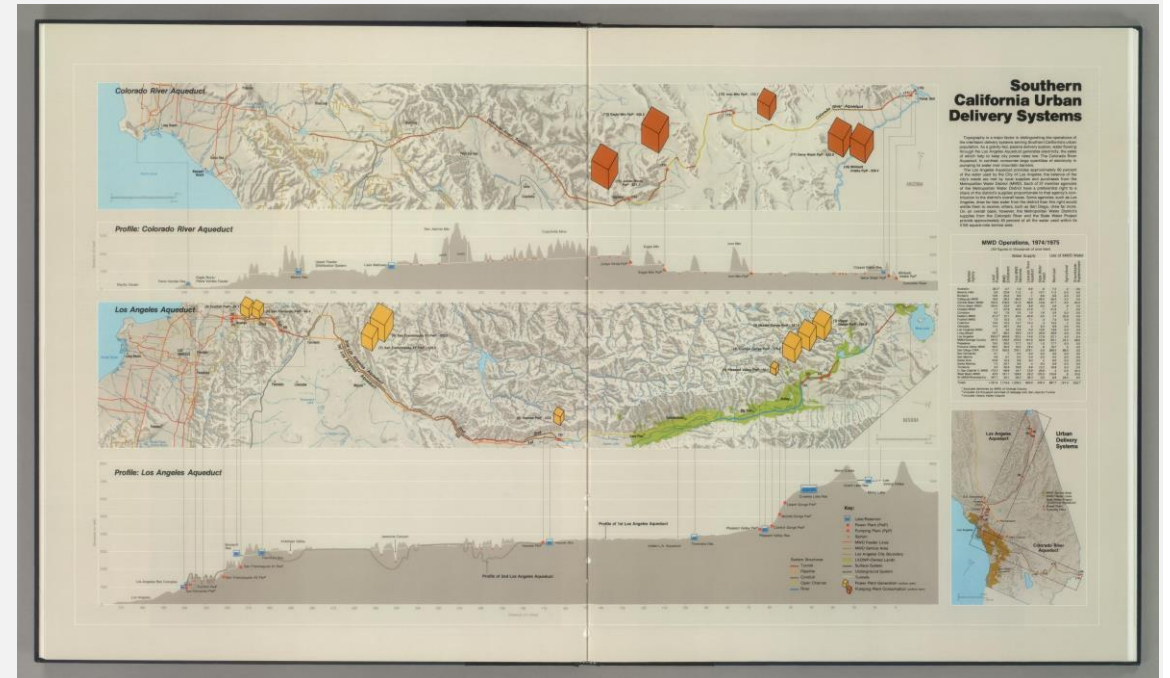
## Content

- Unique: Series of maps not published in other format

## Preservation Strategy:

- Digitize each page, retain individual images
- Create metadata which includes date and other key information.
- **Islandora Approach:** Create as a book object with the pages as Large Image and a PDF can be created for the entire book. This enables researchers to use and reference only one page.

## Display/Experience



<https://www.davidrumsey.com/luna/servlet/s/4lzhyo>

# Topographic Maps of the United States

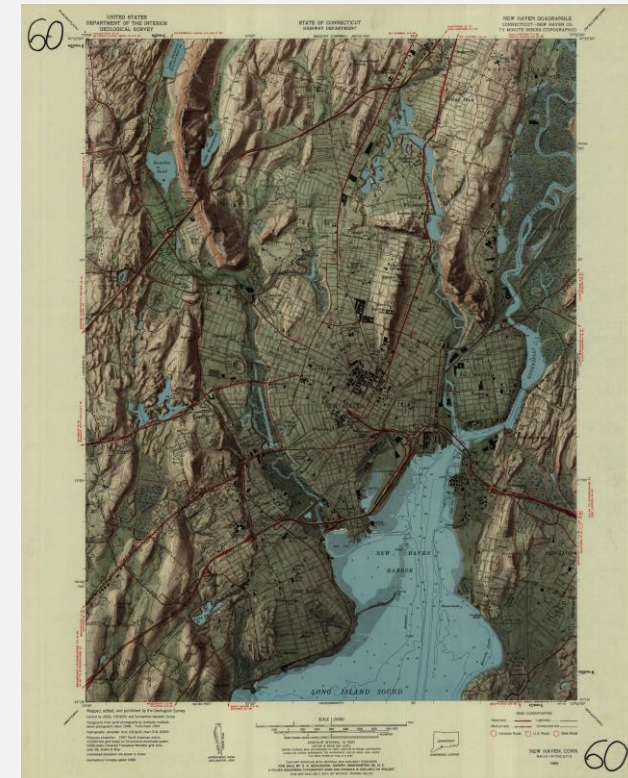
## Content

- Not Unique

## Preservation Strategy:

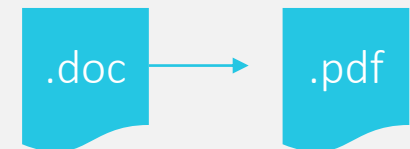
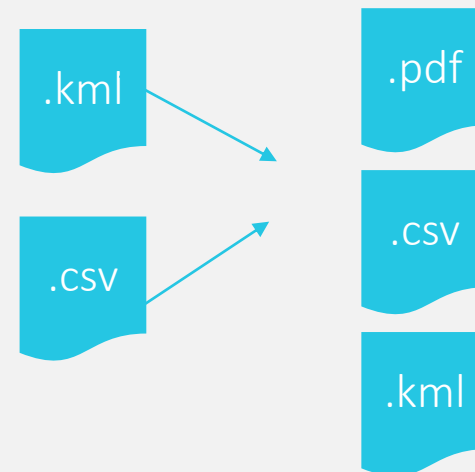
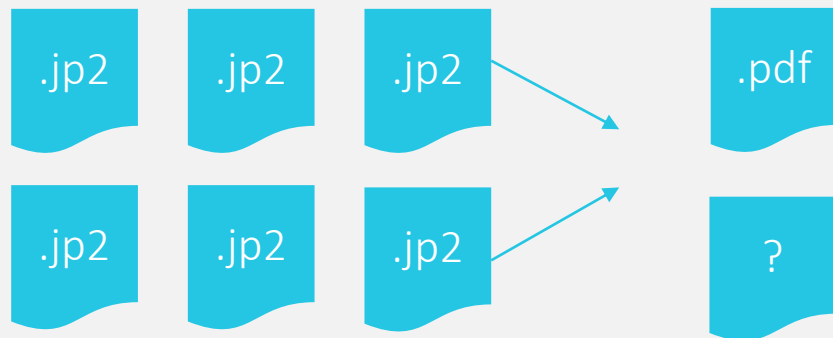
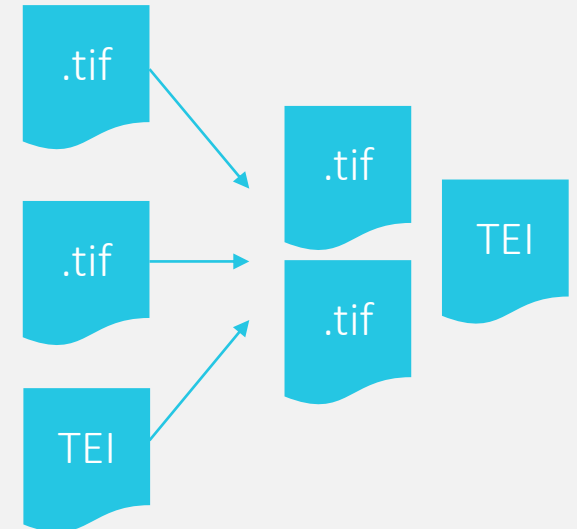
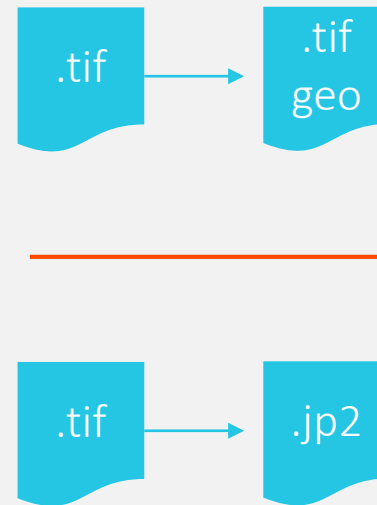
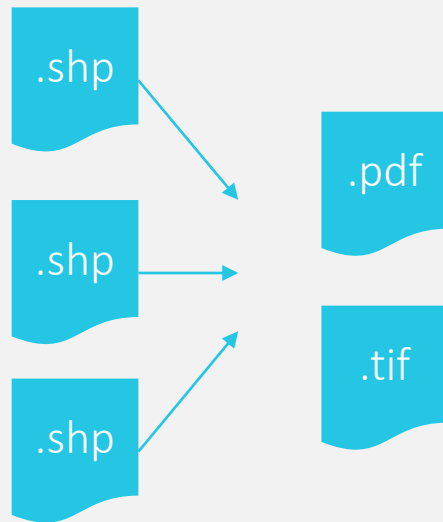
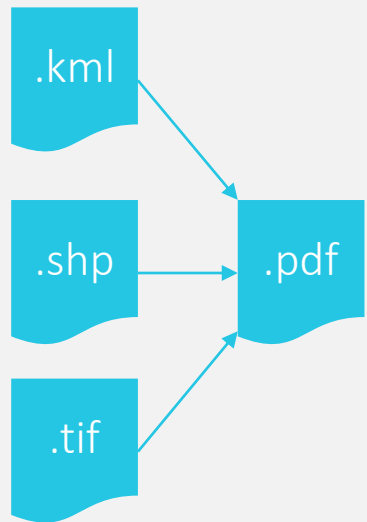
- Verify topographic map is available via USGS topoView, if available do not digitize.
- USGS topoView provides GeoTIFF version so no value add in digitizing your own collection of USGS topographic maps.

## Display/Experience



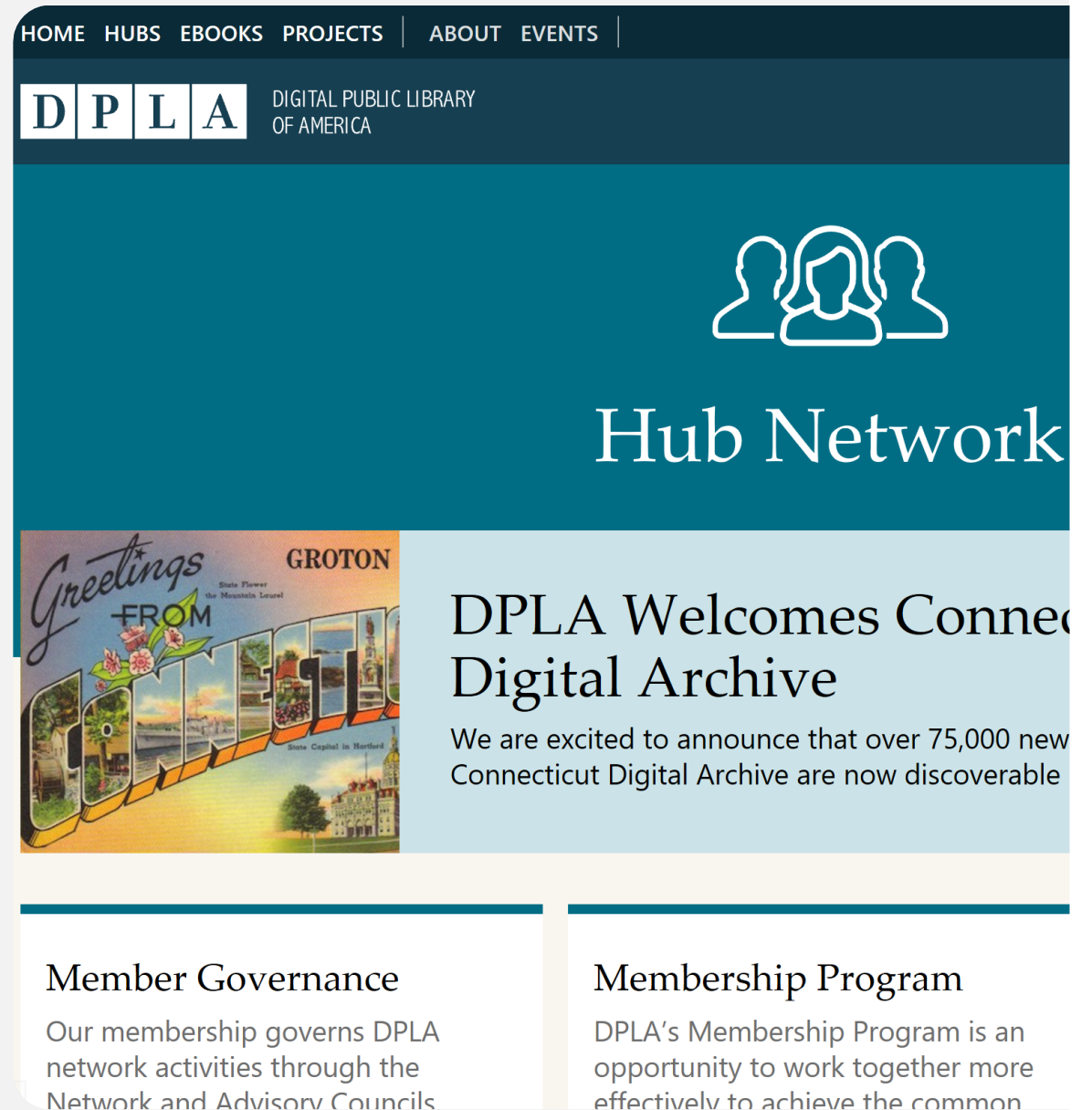


# Scenarios



# Access to Content


- Ingest content into a digital repository
- Is the digital repository part of the Digital Public Library of America (DPLA)?
- Integrate your digital repository content in your ILS.
- Focus on digitizing and cataloging the digital version.




The screenshot shows the DPLA Hub Network website. The top navigation bar includes links for HOME, HUBS, EBOOKS, PROJECTS, ABOUT, and EVENTS. Below this is the DPLA logo and the text "DIGITAL PUBLIC LIBRARY OF AMERICA". The main header features a white icon of three stylized people and the text "Hub Network". A large teal banner contains the text "DPLA Welcomes Connected Digital Archive" and a sub-headline "We are excited to announce that over 75,000 new Connecticut Digital Archive are now discoverable". To the left of this banner is a vintage postcard from Groton, Connecticut, with the text "Greetings FROM GROTON" and "State Capital in Hartford". Below the banner are two columns of text: "Member Governance" and "Membership Program".

HOME HUBS EBOOKS PROJECTS | ABOUT EVENTS |

**D P L A** DIGITAL PUBLIC LIBRARY OF AMERICA



Hub Network



**DPLA Welcomes Connected Digital Archive**

We are excited to announce that over 75,000 new Connecticut Digital Archive are now discoverable

**Member Governance**

Our membership governs DPLA network activities through the Network and Advisory Councils


**Membership Program**

DPLA's Membership Program is an opportunity to work together more effectively to achieve the common



# Thank You

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